International Center for Law & Economics

Comments of the International Center for Law & Economics

RE: Application of Kuiper Systems LLC (Amazon Leo) for a Non-Geostationary Satellite Orbit Direct-to-Device System, ICFS File No. SAT-LOA-20260601-00224

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I. Introduction

The International Center for Law & Economics (ICLE) supports Kuiper Systems LLC's (Amazon Leo) application to provide direct-to-device (D2D) service in the 1.6/2.4 GHz mobile-satellite service (MSS) bands (ICFS File No. SAT-LOA-20260601-00224; Call Sign S00917).

Satellite broadband and D2D are emerging, capital-intensive markets. High fixed costs and long deployment cycles make it difficult to enter the consumer low-Earth-orbit (LEO) broadband market.[1] Amazon Leo's deployment would help a competitor capable of operating at scale to overcome those hurdles, thereby strengthening competition and benefiting consumers.[2]

Amazon Leo's proposed entry also shows how existing spectrum transactions can support new service. Amazon has agreed to acquire Globalstar, including its 1.6/2.4 GHz MSS authorizations, subject to the transaction's closing.[3] The deal would pair Globalstar's operating MSS network and spectrum authorizations with Amazon Leo's planned D2D constellation. It would put scarce spectrum to more intensive use while giving companies a predictable basis for investment, consistent with the Federal Communications Commission's (FCC) longstanding support for secondary-market spectrum transactions.

The FCC should grant the application and appropriate limited waivers so that another operator can expand D2D capacity using licensed spectrum that sees limited use. It should also address legitimate coexistence and interference concerns raised by terrestrial licensees and other satellite operators.

II. Competition, Connectivity, and Spectrum Use

LEO satellite broadband remains a developing market with steep entry costs. Before serving customers, a provider must invest heavily in satellites, launches, ground infrastructure, and regulatory approvals. Building a constellation—and earning a return on it—takes years.[4]

Those costs, along with spectrum constraints, likely limit how many providers can operate at scale. There is no fixed number of competitors that every broadband market needs,[5] but entry by a credible

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[1] Kristian Stout & Michael Calabrese, *Competition in the Low-Earth-Orbit Satellite Industry*, TRUTH ON THE MKT. (Oct. 10, 2023), https://truthonthemarket.com/2023/10/10/competition-in-the-low-earth-orbit-satellite-industry [hereinafter Stout & Calabrese, *LEO Competition*]. *See also Kuiper Systems LLC, Application for Extension or Waiver of the Milestone Deadline*, Order, ICFS File No. SAT-MOD-20260129-00065, DA 26-553, ¶ 1 (Space Bur. June 5, 2026) (calling Amazon Leo a "new competitor-at-scale" in low-Earth-orbit broadband).

[2] Michael Calabrese *et al.*, *Low Earth Orbit Satellites: Policies to Promote Spectrum Sharing, Foster Competition, and Close Digital Divides* (Int'l Ctr. for L. & Econ. & New America Oct. 30, 2025), https://laweconcenter.org/wp-content/uploads/2025/10/Low_Earth_Orbit_Satellites_FINAL.pdf [hereinafter LEO Policy Working Group].

[3] *Approval of the Proposed Assignment and Transfer of Control of Licenses and Authorizations Held by Globalstar to Amazon*, Public Notice, GN Docket No. 26-134, DA 26-550, at 1 (June 4, 2026) (accepting the transfer applications for filing).

[4] Stout & Calabrese, *LEO Competition*, *supra* note 1.

[5] Eric Fruits *et al.*, *Dynamic Competition in Broadband Markets: A 2024 Update* (Int'l Ctr. for L. & Econ. June 4, 2024), https://laweconcenter.org/wp-content/uploads/2024/06/Broadband-Competition-2024-Update.pdf [hereinafter Fruits *et*

additional provider can put pressure on incumbents and give consumers more choice.[6] Timely application review and workable spectrum-sharing rules can reduce the uncertainty and delay that compound the costs of entry.[7]

Starlink dominates commercial LEO broadband service in the United States and nothing in the record suggests that it gained that position through anticompetitive conduct. Still, another provider capable of operating at scale would give consumers and terrestrial partners an alternative.

Amazon Leo proposes a D2D constellation of 5,105 satellites in five orbital shells, at altitudes ranging from 510 to 580 kilometers.[8] It plans to use the 1.6/2.4 GHz band and standards developed by the 3rd Generation Partnership Project (3GPP) to connect with compatible commercial handsets, without specialized customer equipment.[9] That design could extend messaging, location sharing, roadside assistance, and emergency communications to people beyond the reach of terrestrial networks, including those in rural and remote areas.[10] D2D could also provide backup connectivity when disasters disrupt terrestrial service.[11]

The application and Amazon's proposed acquisition of Globalstar could also make more intensive use of existing MSS authorizations. MSS bands support satellite links to consumer devices, but use varies considerably by band.[12] The 2 GHz MSS band sees relatively limited use,[13] while Globalstar and Iridium actively serve customers in the Big LEO band. Globalstar uses 1.6 GHz frequencies for uplinks and 2.4 GHz frequencies for downlinks; Iridium uses 1.6 GHz frequencies in both

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al., *Dynamic Competition*]; Eric Fruits *et al.*, *A Review of the Empirical Evidence on the Effects of Market Concentration and Mergers in the Wireless Telecommunications Industry* (Int'l Ctr. for L. & Econ. Sept. 17, 2019), https://laweconcenter.org/wp-content/uploads/2019/09/ICLE-Telco_Merger_Lit_Review_Jud_Rpt_FINAL.pdf; Thomas W. Hazlett & Robert W. Crandall, *Competitive Effects of T-Mobile/Sprint: Analysis of a "4-to-3" Merger*, in PROCEEDINGS OF THE TPRC2024: THE RESEARCH CONFERENCE ON COMMUNICATIONS, INFORMATION AND INTERNET POLICY (2024), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4736059.

[6] Fruits *et al.*, *Dynamic Competition*, *supra* note 5. *See also Kuiper Systems LLC*, DA 26-553, ¶ 1.

[7] LEO Policy Working Group, *supra* note 2.

[8] *Application of Kuiper Systems LLC for Authority to Launch and Operate a Non-Geostationary Satellite Orbit System*, Legal Narrative § II, ICFS File No. SAT-LOA-20260601-00224 (July 24, 2026) [hereinafter Kuiper D2D Application] (proposing 5,105 satellites in five orbital shells at altitudes of 510–580 km); *see also Space Bureau Accepts for Filing Application of Amazon Leo for NGSO D2D System*, Public Notice, ICFS File No. SAT-LOA-20260601-00224, DA 26-866, at 1 (Space Bur. Aug. 18, 2026) (accepting the application for filing).

[9] Kuiper D2D Application, *supra* note 8, at 7, 10.

[10] *Id.* at 10 (explaining that D2D would improve coverage for rural and remote users); *see also id.* at 2 (describing service for people beyond existing networks).

[11] *Id.* at 11 (explaining that D2D could keep rescue and emergency communications running when terrestrial networks fail); *see also id.* at ii (describing D2D as a fallback during terrestrial outages).

[12] LEO Policy Working Group, *supra* note 2.

[13] Timothy M. Farrar & J. Armand Musey, *Spectrum for Emerging Direct-to-Device Satellite Operators* (TMF Assocs. & Summit Ridge Grp. Jan. 27, 2025), https://summitridgegroup.com/wp-content/uploads/D2D-White-Paper-SRG-TMF-Final.pdf [hereinafter Farrar & Musey, SRG/TMF].

directions.[14] Satellite operators are also developing D2D services through agreements involving MSS rights and terrestrial mobile spectrum.[15]

If the transaction closes, Amazon Leo could pair Globalstar's operating network and MSS authorizations with its planned constellation. That combination offers a practical way to expand the capacity and reach of spectrum that already supports D2D service.

III. Waivers and Technical Review

Amazon Leo seeks limited waivers of several rules in Parts 2 and 25.[16] Some requests address filing procedures. Others concern frequency allocations, handset licensing, limits on signal strength, the treatment of links to users and ground stations, and rules for reviewing competing satellite applications.

The FCC may waive a rule for good cause when special circumstances warrant a departure and a waiver would serve the public interest. That includes cases in which strict application would frustrate the rule's purpose.[17] The question for each request is whether the FCC can grant relief while retaining meaningful technical review and protection against interference.

Amazon Leo's Schedule S request illustrates the distinction. Schedule S collects technical data for satellite applications. Amazon Leo entered a representative orbital plane in the form and supplied a separate spreadsheet with the full dataset the rules require.[18] If those materials let FCC staff assess individual satellites and potential interference, requiring Amazon Leo to enter the same data again in Schedule S would add work without strengthening review.

The FCC took a similarly tailored approach in its June 2026 Amazon Leo milestone order. It granted a limited waiver with conditions designed to preserve incentives for rapid deployment and efficient spectrum use.[19] The FCC should grant the requests here where Amazon Leo shows that substantive

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[14] *Id.*

[15] GSMA Intell., *What Does the Early Data on D2D Usage Tell Us?* (May 29, 2026), https://www.gsmaintelligence.com/blogs/what-does-the-early-data-on-d2d-usage-tell-us. *See also* Fed. Commc'ns Comm'n, Order, DA 26-398, ¶¶ 1–2 (Space Bur. Apr. 23, 2026), https://docs.fcc.gov/public/attachments/DA-26-398A1.pdf (reaffirming licensees' exclusive mobile-satellite-service spectrum rights and encouraging secondary-market transactions).

[16] *See* Kuiper D2D Application, *supra* note 8, Ex. B (Waiver Requests), at 1, 6–9; 47 C.F.R. § 1.3 (2026); *Ne. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969).

[17] 47 C.F.R. § 1.3 (2026); *Ne. Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153, 1157, 1159 (D.C. Cir. 1969).

[18] Kuiper D2D Application, *supra* note 8, Ex. B (Waiver Requests), at 7.

[19] *Kuiper Systems LLC*, DA 26-553, ¶¶ 1–2.

review and interference protections will remain intact, imposing conditions where needed to protect coexistence.[20]

A. Address Interference Through Targeted Conditions

Expedited review must still address credible technical concerns from terrestrial licensees and other satellite operators. The FCC should evaluate evidence of potential interference and, where needed, impose conditions tied to actual performance or require coordination. That approach can protect existing services while allowing more intensive non-geostationary orbit (NGSO) operations and more efficient spectrum use.[21]

Good-faith frequency coordination is essential to sharing spectrum. The FCC can address documented objections through conditions and coordination requirements, leaving operators room to negotiate the details of coexistence. Speculative disputes should not delay a decision on the application.

IV. Conclusion

The FCC should grant Amazon Leo's application and the limited waivers that preserve substantive technical review and safeguards against interference. High entry costs and long deployment timelines make a credible additional LEO provider especially valuable. Amazon Leo's planned constellation could expand D2D service through compatible handsets, give consumers and network partners another option, and provide connectivity where terrestrial networks are unavailable or disrupted.

If Amazon's acquisition of Globalstar closes, the combined system could put Globalstar's operating network and MSS authorizations to more intensive use. The FCC should address documented engineering concerns through tailored conditions and coordination requirements. Timely approval on those terms would support competitive entry, protect existing services, and make more efficient use of scarce spectrum.

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[20] *Kuiper Systems LLC*, DA 26-553, ¶¶ 1–2; Gerald Adams, *Out of Orbit: How Outdated Spectrum Rules Hold Back Satellite Broadband* (Int'l Ctr. for L. & Econ. Aug. 12, 2026), https://laweconcenter.org/resources/out-of-orbit-how-outdated-spectrum-rules-hold-back-satellite-broadband [hereinafter Adams, Out of Orbit].

[21] *See* Adams, *Out of Orbit*, *supra* note 20; Eric Fruits & Kristian Stout, *Comments of the International Center for Law & Economics Regarding Modernizing Spectrum Sharing for Satellite Broadband*, SB Docket No. 25-157 (July 28, 2025), https://laweconcenter.org/wp-content/uploads/2025/07/2025-EPFD-Comments.pdf.